

Before signing this declaration, each person signing must:

1. Review the declaration and verify the correctness of all information therein; and
2. Review the specification and the claims, including any amendments made to the claims.

After the declaration is signed, the specification and claims are not to be altered.

To the inventor(s):

The following is cited in or pertinent to the declaration attached to the accompanying application:

Title 37, Code of Federal Regulations, Section 1.56

Duty to disclose information material to patentability

(a) A patent by its very nature is affected with a public interest. The public interest is being served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by Sections 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

(1) prior art cited in search reports of a foreign patent office in a counterpart application, and

(2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

Title 35, United States Code, Section 101

Inventions patentable

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Title 35, United States Code, Section 102

Conditions for patentability; novelty and loss of right to patent

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States, or

(c) he has abandoned the invention, or

(d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States, or

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent, or

(f) he did not himself invent the subject matter sought to be patented, or

(g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

Title 35, United States Code, Section 103

Conditions for patentability; non-obvious subject matter

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

(c) Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Title 35, United States Code, Section 112 (in part)

Specification

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Title 35, United States Code, Section 119

Benefit of earlier filing date in foreign country; right of priority

An application for patent for an inventor filed in this country by any person who has, or whose legal representatives or assigns have, previously regularly filed an application for a patent for the same inventor in a foreign country which affords similar privileges in the case of applications filed in the United States or to citizens of the United States, shall have the same effect as the same application would have if filed in this country on the date on which the application for patent for the same invention was first filed in such foreign country, if the application in this country is filed within twelve months from the earliest date on which such foreign application was filed; but no patent shall be granted on any application for patent for an invention which had been patented or described in a printed publication in any country more than one year before the date of the actual filing of the application in this country, or which had been in public use or on sale in this country more than one year prior to such filing.

Title 35, United States Code, Section 120

Benefit of earlier filing date in the United States

An application for patent for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in an application previously filed in the United States, or as provided by section 363 of this title, which is filed by an inventor or inventors named in the previously filed application shall have the same effect, as to such invention, as though filed on the date of the prior application, if filed before the patenting or abandonment of or termination of proceedings on the first application or an application similarly entitled to the benefit of the filing date of the first application and if it contains or is amended to contain a specific reference to the earlier filed application.

Please read carefully before signing the Declaration attached to the accompanying Application.

If you have any questions, please contact us.

Roof Retaining Apparatus

Background of the Invention

Field of the Invention

The present invention relates to a roof retaining apparatus. More particularly, the retaining apparatus incorporates at least a framework with netting stretched thereacross, the framework being fixable to a slanted roof structure to keep debris and workers from falling therepast.

Prior Art

Heretofore various apparatus have been proposed for maintaining things, and persons, on a slanted rooftop.

For example, U.S. Patent No. 5,749,738 discloses a protective device mounted at the base of a roof and comprising a framework upon which a net is engaged, the framework being held in position by bracing wires engaged to the roof.

Still further, U.S. Patent No. 6,220,390 discloses a rooftop scaffolding system which engages a slanted roof and has a moveable platform thereon upon which a worker stands.

Yet further, U.S. Patent No. 4,805,735 discloses a guard system for a scaffolding arrangement which includes a net wall spanning gap between upper and lower platforms of the device.

However, to date no one has yet proposed the roof retaining apparatus which both creates a scaffold and has a net thereabove, with as many apparatus as necessary being engageable one to the other so as to accommodate any required expanse of roof.

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Summary of the Invention

According to the invention there is provided a framework comprising at least two angulated arms, an upright post engaged to each arm, upper and lower cross members engaged to and between the arms, the arms having structure thereon for mounting scaffolding thereover and a net stretched between and fixed to the upright posts and cross members.

Brief Description of the Drawings

Figure 1 is a perspective view of a roof retaining apparatus made in accordance with the teachings of the present invention.

Figure 2 is a perspective view of the apparatus of Figure 1 shown mounted to a slanted.

Figure 3 is a perspective view showing a plurality of apparatuses engaged to accommodate a longer section of roof.

Description of the Preferred Embodiments

Referring now to the drawings in greater detail there is illustrated therein a roof retaining apparatus made in accordance with the teachings of the present invention and generally identified by the reference numeral 10.

As shown in the apparatus 10 comprises a framework 12 which is adapted to engaged a slanted roof 13 (Figure 2), a net 14 and a structure 16 (Figure 2) used in creating a scaffold 18 upon which a roofer may stand near a bottom edge 19 of the roof 13.

The framework 12 includes two upstanding posts or uprights 20 to which at least one top cross member 22 and one bottom cross member 24 is engageable.

The upstanding posts 20 themselves engage angulated roof engaging arms 26 which arms 26 each further support the structure 16, in the form of a brace element 16, which cooperate to form and support the scaffold 18, positioned proximate to the bottom cross member 22.

The arms 26 each include an elongated planar portion 28 which flushly overlies the roof 13 and engages to the roof 13 through engagement slots 30 in the free end 32 of the planar portion 28, the slots 30 engaging over securements 34, such as nails 34, driven into the roof 13. It will be understood that the slots 30 are provided so that, once roofing material 36 has been applied thereover, the arms 26 need merely be slid sideways, at a slight angle, to remove them without disturbing the applied roofing material 36 to any significant degree.

Next it will be appreciated that the uprights 20 and cross members 22, 24 are all provided with spaced apart net 14 engaging members 40, such as eyes 40 illustrated, with end edges 42 of the net 14 having corresponding positioned therealong eye engaging members 44, such as hooks 44 illustrated, which cooperate with the eyes 40 for allowing stretching of the net 14 across the space defined within the engaged uprights 20 and cross members 22, 24.

It also will be understood that at least two uprights 20 are required to construct the framework 12 of the apparatus 10 of the present invention.

However, as best illustrated in Figures 1 and 3, this should not be construed as limiting.

In this respect, as shown, the uprights 20 are each adapted to engage two top and two bottom cross members 22 and 24, respectively, one to either side thereof.

Thus, when the expanse of roof 13 increases beyond the stretch of one framework 12, multiple uprights 20 and cross members 22, 24 are engageable to each other to provide an extended framework 12 which accommodates the required expanse, with one elongate, or multiple, net(s) 14 extending across the expanse of the extended framework 12.

For added benefit and strengthening of the framework 12, if desired, points of joining between the uprights 20, cross members 22, 24, and arms 26 can be secured through insertion of pins 50 into corresponding aligned engagement ports 52 formed within the various structures 20, 22, 24 and 26, to be joined, as best

illustrated in Figure 1.

With respect to the manner of joining the various structures of the framework 12 together, it will be seen that each arm 26 includes an upstanding flange 54 at an end 60 opposite the free end 32 thereof. Along the upstanding flange 54 there is provided a sleeve 62 into which a bottom end flange 64 of an upright 20 is received.

Mounted along a lower area of each upright 20 is a sleeve 66 which is sized and configured to receive therein two end flanges 68 of adjacently positioned bottom cross members 24, in drop in fashion.

Another identical sleeve 66 is mounted along an upper area of each upright 20 as well, for receiving therein, also in drop in fashion an end flange 66 of each of two adjacent top cross members 22.

Such simple means of forming the joinings of the various framework 12 structures makes the apparatus 10 very easy to build.

Further, the simple manner of engaging and disengaging of the apparatus 10 from its roof 13 mounting also makes the apparatus 10 very easy to manipulate, a definite advantage when one is dealing with a slanted roof 13.

Still further, positioning of the scaffold forming brace elements 16 substantially at a position adjacent the bottom cross member 24 maintains debris, as well as a roofer, from falling past the net 14, forming, as it were, a "floor" for the apparatus 10, as well as providing a more horizontal surface than that offered by

the roof 13, upon which a roofer may more securely stand.

As described above, the apparatus 10 provides a number of advantages, some of which have been described above and others of which are inherent in the invention. Also, modifications may be proposed to the apparatus 10 without departing from the teachings herein. Accordingly, the scope of the invention is only to be limited as necessitated by the accompanying claims.